



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

- MCLEAN, J. P.—A study of American Archæology. *Universalist Quarterly*, July.
- MAYERS, W. F.—On the stone figures at Chinese tombs and offering of living sacrifices. *J. N. China Br. Roy. As. Soc.*, xii.
- Nubian races. *Pop. Sc. Month.*, Aug.
- PARISOT, J.—Note sur la langue des Taensas. *Rev. Linguistique*, April.
- PICKERING, W. A.—Chinese secret societies. *J. Straits Br. R. As. Soc.*, iii.
- POSTGATE, J. P.—A philological examination of the myth of the Sirens. *J. of Philology*, xvii.
- PREGER, H.—Psychogenesis. *Deutsche Rundschau*, May.
- RHEA, REV. S. A.—Brief grammar and vocabulary of the Kurdish language. *J. Am. Oriental Soc.*, x, ii.
- SMITH, W. R.—Animal worship and animal tribes among the Arabs in the Old Testament. *J. of Philology*, xvii.
- STONE, W. L.—Remains of an ancient Indian work on Fish creek near Saratoga Springs. *Mag. Am. History*, July.
- STUART, VILLIEKS—Nile gleanings, 58 plates. Scribner & Welford.

GEOLOGY AND PALÆONTOLOGY.

GEOLOGY OF EGYPT AND OF THE LIBYAN DESERT.—Prof. Carl Zittel has published in the *Abhandlungen* of the Royal Academy of Munich for 1880, an essay on the above subject. It is largely based on the observations and collections of Schweinfurth and Güssfeld. As is known, the order of succession of the formations in Northern Africa is from the older in the south to the later in the north. An exception to this is found in the region bordering the Red sea, where a long extension northward of the primitive Azoic formation exists. Dr. Zittel shows that the greater part of the region west of this primitive plateau consists of the upper and lower Nummulitic Eocene. To the south and south-west the Cenomanian Cretaceous comes to the surface, the lower beds especially appearing from beneath lines of Eocene or upper Cenomanian bluffs. The oases are excavations in the latter formations, whose bottoms consist of the Lower Cenomanian.

VERTEBRATE PALÆONTOLOGY OF INDIA.—Dr. Lydekker continues to make important contributions to this subject. His latest is a memoir on the Siwalik and Narbada Proboscidea, in which a great deal of light is thrown on the structure of the dentition of many of the species. Two species are named for the first time, *Dinotherium sindiense* and *Mastodon falconeri* (a trilophodont), while several others are described for the first time under MS. names of Falconer. In a preface the author puts the Indian species of *Rhinocerotidae* in order, and gives information not hitherto accessible, by which they may be referred to their proper genera.

In the *Journal* of the Asiatic Society of Bengal for 1880, Dr. Lydekker gives a synopsis of the species of extinct Vertebrata hitherto found in the peninsula of India. He enumerates twenty-eight species of fishes, mostly Palæozoic; seventeen of Selachii, mostly Mesozoic; thirty-nine Reptilia and Batrachia, divided

equally between the Mesozoic and Tertiary, and one hundred and twenty-five Mammalia.

THE GEOLOGY OF THE LOWER VALLEY OF THE DELAWARE.—Mr. H. C. Lewis has recently investigated this subject, and presents us with the following résumé of his results in the Proceedings of the Philadelphia Academy:

Forming the N. W. boundary of the Philadelphia gravel and brick-clay is a hill of gneiss, rising two hundred feet or more above the river, which may be called the Upland Terrace. It has a N. E. and S. W. trend, and in this vicinity is at an average distance of five miles from the river.

Within the Upland Terrace, resting upon its slope and extending to the river, is a series of stratified gravels and a boulder-bearing brick-clay. Of these the oldest is the "Fossiliferous gravel;" a gravel lying near the terrace and under the brick-clay, and containing pebbles which frequently are fossiliferous. Of more recent age, and at a lower level, is the "Philadelphia red gravel," which is made up of the pebbles of the Fossiliferous gravel mixed with fragments of Triassic red shale and other rocks brought down the Delaware valley. It is distinctly stratified, rests upon decomposed gneiss, and contains rounded boulders dropped by floating ice. Upon both of these gravels rests the Philadelphia brick-clay, often lying unconformably upon them in a series of pot-holes or wave-like forms, and apparently an aqueous deposit.

A yet more recent formation, the "River gravel and sand," lies within the others and close to the river, and is made up of flattened pebbles composed of the rocks over which the river flows. Upon this, in the river flats, lies a modern mud, the "Recent Alluvium."

Back of the Upland Terrace, isolated patches of two surface deposits, more ancient than any yet described, lie upon the hills. These are, the "Branchtown clay," at a height of two hundred and fifty feet, containing boulders of Potsdam rocks but no traces of Triassic red shale or of fossiliferous pebbles; and the "Bryn Mawr gravel," which caps hills of a higher elevation, and which, containing boulders and pebbles of identical material with those of the last, is characterized by the presence of a hard iron conglomerate or sandstone. This conglomerate, occurring also in New Jersey, and named the "Mt. Holly Conglomerate," is conjectured to be of Tertiary age.

In these seven formations is written the geological history of the Delaware valley.

ORIGIN OF CORAL REEFS AND ISLANDS.—*Nature* for August 12th contains a suggestive essay on this subject by Mr. John Murray of the Challenger expedition. His views do away with the great and general subsidences required by Darwin's theory,

and are in harmony with Dana's views of the great antiquity and permanence of the great ocean basins, which all recent deep-sea researches appear to support. Murray thus summarizes his views:

1. That foundations have been prepared for barrier reefs and atolls by the disintegration of volcanic islands, and by the building up of submarine volcanoes by the deposition on their summits of organic and other sediments.

2. That the chief food of the corals consists of the abundant pelagic life of the tropical regions; and the extensive solvent action of sea water is shown by the removal of the carbonate of lime shells of these surface organisms from all the greater depths of the ocean.

3. That when coral plantations build up from the submarine banks they assume an atoll form, owing to the more abundant supply of food to the outer margins, and the removal of dead coral rock from the interior portions by currents and by the action of the carbonic acid dissolved in sea water.

4. That barrier reefs have built out from the shore on a foundation of volcanic debris or on a talus of coral blocks, coral sediment, and pelagic shells, and the lagoon channel is formed in the same way as a lagoon.

5. That it is not necessary to call in subsidence to explain any of the characteristic features of barrier reefs or atolls, and that all these features would exist alike in areas of slow elevation, of rest, or of slow subsidence.

In conclusion it was pointed out that all the causes here appealed to for an explanation of the structure of coral reefs are proximate, relatively well known and continuous in their action.

THE "COMPTES RENDUS STENOGRAPHIQUES" of the Congress of Geologists, held in the Trocadero Palace during the Exposition of Paris of 1878, has just appeared. It is an octavo volume of over 300 closely printed pages. These include forty memoirs with the related discussions. Seven articles are by Americans—Messrs. Hall, Hunt, Lesley, Cope, Blake and Chamberlin. Among other contributors we notice the names of Daubrée, Favre, Delesse, Lapparent, Barrois, Stephanesco, Rutot, Van den Broek, Ribeiro, Almera, Szabo, etc. Many of the memoirs are of general interest and importance, *e. g.*, *Daubrée* on Experimental studies on fractures of the earth's crust; *Favre* on the effect of folds and lateral twists in geology; *Lapparent* on the plications of the Cretaceous formation between France and England; *Hall* on the nomenclature of the Palæozoic rocks of the United States; *DeMoeller*, the divisions of the Carboniferous; *Cope*, relations of horizons of extinct Vertebrata of Europe and North America; *Fannetaz* on the propagation of heat through rocks; *Hunt* on the Precambrian rocks of North America; *Ribeiro* on the geology of Portugal.

GEOLOGICAL NEWS.—Mr. S. A. Miller, of Cincinnati, is publishing an important series of historical monographs of North American geology. He has concluded the Palæozoic and Mesozoic portions, and is preparing that of the Tertiaries.—Mr. M. E. Wadsworth, of Cambridge, has recently issued in the Bulletin of the Museum of Comparative Zoölogy, a series of full notes on the iron and copper districts of Lake Superior. He gives many graphic sections of vein contacts, explains the stratigraphy and reviews the literature.—Prof. Owen has recently described a new species of Theromorph reptile from the Permian bed of South Africa, under the name of *Platypodosaurus robustus*. The animal nearly resembles some of the Texan forms described by Cope in 1878.—Dr. J. W. Spencer, in the *Canadian Naturalist*, Vol. VIII, describes a number of new Graptolites from the Niagara formation. Four of them are referred to three new genera, *Calyptograpsus*, *Rhizograpsus* and *Acanthograpsus*.

GEOGRAPHY AND TRAVELS.¹

THE FRANKLIN SEARCH EXPEDITION.²—This expedition, under Lieut. Schwatka, has returned home after a remarkably successful journey to King William Land, and the results of their investigations into the circumstances attending the loss of the memorable British company commanded by Sir John Franklin have been given at length to the world through the columns of the *New York Herald*. Lieut. Schwatka wisely lost no time in looking up the cairn on the Melville peninsula, but set out early in the spring of 1879 on his sledge journey to the scene of the great disaster. Leaving Depot island, in Hudson's bay, on April 1st, they traversed a region previously unvisited by white men, proceeding in a nearly north-westerly direction by the shortest route, to the mouth of Back's river. The party was composed of four white men and thirteen Innuits, with sleds drawn by forty-two dogs. They took with them only about one month's rations, and the success of the expedition is doubtless largely owing to their ability to live on the supplies furnished by the country. Their route should have led them across the Wager river, but at N. lat. 65° 45' where, according to the charts, they should have been on its banks, nothing could be seen of it. They soon, however, came to an important branch of Back's river, which they followed ninety miles, leaving it near its mouth. Its whole length is 110 to 120 miles. They named it Hayes river in honor of the President. From the tribe living on this stream they heard the same account of the sinking of one of the vessels of Franklin's expedition at a point near O'Reilly's island (N. lat. 63° 30', W. long. 95°) in the spring of 1849 as was related to Capt. Hall. On May 31st, after visiting Montreal island, they met the

¹ Edited by ELLIS H. YARNALL, Philadelphia.

² See NATURALIST for August, 1878, p. 571, and November, 1879, p. 723.